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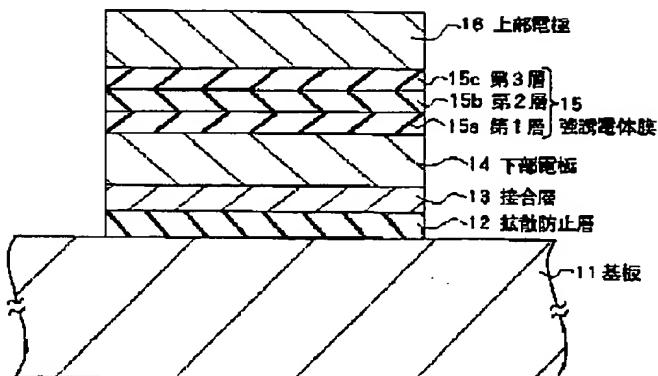
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TITLE : FERROELECTRIC CAPACITOR AND
MANUFACTURE THEREOF, AND
MEMORY CELL THEREWITH



ABSTRACT : PROBLEM TO BE SOLVED: To miniaturize a device by reducing the size of crystal grains while maintaining excellent ferroelectric characteristics.

SOLUTION: A lower electrode 14, a ferroelectric film 15 and an upper electrode are formed on a substrate 11. The ferroelectric film 15 is laminated with a plurality of layers 15a, 15b and 15c containing polycrystalline lamellar crystal structure oxide ($\text{Bi}_x(\text{Sr}, \text{Ca}, \text{Ba})_y(\text{Ta}, \text{Nb})_2\text{O}_{9+d}$) and divided each other. In this case, at least one layer of the layers 15a, 15b and 15c has different ($\text{Sr}, \text{Ca}, \text{Ba}$) component ratio y from other layers. In other words, ($\text{Sr}, \text{Ca}, \text{Ba}$) component ratio y of the ferroelectric film 15 is made to change. Thereby, the size of the crystal grains in the lamellar crystal structure oxide is reduced while excellent ferroelectric characteristics is obtained.

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